

Having thus described the preferred embodiments, the invention is claimed to be:

1. A drive roller for use on a wire feeding mechanism to advance a continuous length of wire, said drive roller comprising:

a hub having an axis and an outer surface extending circumferentially about said axis; and

5 a plating on said outer surface and extending circumferentially thereabout.

2. The drive roller of claim 1 wherein said plating is a chrome alloy.

3. The drive roller of claim 2 wherein said chrome alloy has between about 96% and about 97% chromium.

4. The drive roller of claim 2 wherein said plating has a hardness of about Rockwell C 70 to about Rockwell C 72.

5. The drive roller of claim 2 wherein said plating has a thickness of about 0.0004 inches to about 0.0006 inches.

6. The drive roller of claim 1 wherein said plating is a nickel coating.

7. The drive roller of claim 6 wherein said plating has a hardness of approximately Rockwell C 60.

8. The drive roller of claim 6 wherein said plating has a thickness of about 0.0001 inches to about 0.0030 inches.

9. The drive roller of claim 1 wherein said outer surface includes a first groove extending circumferentially therearound.

10. The drive roller of claim 9 wherein said outer surface includes a second groove extending circumferentially therearound for use when said first groove is sufficiently worn.

11. The drive roller of claim 9 wherein said groove is one of U-shaped and V-shaped.

12. A drive roller for use on a wire feeding mechanism to advance a continuous length of wire, said drive roller comprising:

a hub having an axis and an outer surface extending circumferentially about said axis; and

5 a plating on said outer surface extending circumferentially thereabout, said plating tangentially and compressively contacting an associated continuous length of wire.

13. A wire feeding mechanism for advancing a continuous length of wire along a pathway, said wire feeding mechanism comprising:

a housing having two roller supports each rotatable about a corresponding axis transverse to said pathway, said roller supports being on 5 opposite sides of said pathway and being driveably engaged with each other;

a drive roller on each roller support for rotation therewith and having a roller axis coaxial with the axis of the corresponding roller support, said driver roller including a hub having an outer surface extending circumferentially about said roller axis, and one of a plating and a coating on said outer surface; and

10 said one of a plating and a coating of each of said drive rollers tangentially and compressively contacting a continuous length of wire.

therebetween such that the wire is advanced along said pathway in response to the rotation of said drive rollers.

14. The wire feeding mechanism of claim 13, wherein at least one of said drive rollers is radially adjustably positionable relative to said pathway.

15. The drive roller of claim 12, wherein said plating is a chrome alloy:

16. The drive roller of claim 12 wherein said chrome alloy has between about 96% and about 97% chromium.

17. The drive roller of claim 12 wherein said plating has a hardness of about Rockwell C 70 to about Rockwell C 72.

18. The drive roller of claim 12 wherein said plating has a thickness of about 0.0004 inches to about 0.0006 inches.

19. The drive roller of claim 12 wherein said plating is a nickel coating.

20. The drive roller of claim 12 wherein said plating has a hardness of approximately Rockwell C 60.

21. The drive roller of claim 12 wherein said plating has a thickness of about 0.0001 inches to about 0.0030 inches.

22. The drive roller of claim 12 wherein said outer surface includes a first groove extending circumferentially therearound.

23. The drive roller of claim 12 wherein said outer surface includes a second groove extending circumferentially therearound for use when said first groove is sufficiently worn.

24. The drive roller of claim 12 wherein said groove is one of U-shaped and V-shaped.

25. A method of imparting wear-resistance to a drive roller for use on a wire feeding mechanism to advance a continuous length of wire, said method comprising the steps of:

providing a drive roller having a hub with an axis and an outer surface extending circumferentially about said axis;

liquid honing said outer surface to prepare said outer surface for a chrome alloy plating; and

electrolyzing said drive roller outer surface to apply said chrome alloy thereto.